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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/522,636	03/14/2005	Franck Clausse	4195-020	7387

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EXAMINER

DRODGE, JOSEPH W

ART UNIT	PAPER NUMBER
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1797

MAIL DATE	DELIVERY MODE
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11/20/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/522,636

Applicant(s)

CLAUSSE ET AL.

Examiner

Joseph W. Drodge

Art Unit

1797

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED. (35 U.S.C. § 133)
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 15-31 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 15-31 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. ____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 0305.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date ____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____.

Claims 15-31 are objected to because of the following informalities: The hand-written inserts to the claims are ill-legible and informal. The claims have been examined based only on formal typewritten text. Appropriate correction is required.

Claims 22-25 are rejected under 35 U.S.C. 101 because the claims are not drawn to a statutory category of invention. Claims must be drawn to only one category of invention (i.e., either to "method" or "apparatus/system").

Claims 22-25 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is unclear whether these are method or apparatus claims.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless —

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designates the United States and was published under Article 21(2) of such treaty in the English language.

Claims 29-31 are rejected under 35 U.S.C. 102(e) as being anticipated by Miecznik

PUBLICATION WO01/85620 (and accompanying translation/ US patent 7,273,558.

Miecznik discloses (as best understood from the equivalent US patent serving as a translation) the following: a system/apparatus comprising upstream nanofiltration and/or reverse osmosis filtration membranes for deionising water (column 4, lines 11-14), saturator in the form of a mixing valve tee 12 and downstream mixing reactors 29 and 32, water inlet 25, associated

sludge outlet 31 and additional inlets 27 associated with the mixing tee and reactor for introducing chemicals such as lime and other chemical ions.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 15-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Calvert patent 1,574,363 in view of Riede patent 3,013,981 and Nachtman et al patent 5,868,924. Calvert discloses, for the purpose of providing a body feed of filter aid material, producing lime water

(aqueous mixture or solution of water with added lime) comprising the steps of providing deionised water, adding diatomaceous earth and/or siliceous material that may inherently contain some amount of silicate ions and adding milk of lime to produce a product (especially page 1, lines 54-70 and page 2, lines 45-50). Use of mixer is disclosed at page 3, lines 13-19.

The claims differ in requiring the deionised water to be produced by membrane filtration. Nachtman teaches that reverse osmosis membranes [as in claim 18] provide high purity deionised water (Abstract). It would have been obvious to one of ordinary skill in the art to have utilized reverse osmosis membranes as in Nachtman to provide water of extremely high purity.

The claims also explicitly require that silicate ions be added. Riede manufactures body feed filter aid material from water, lime and diatomaceous earth and teaches that silicates, such as sodium silicate [claims 16 and 17] be added to increase the flux, or reaction rate of the reaction between the diatomaceous earth and lime to provide a more highly activated, effective filter aid (column 2, lines -16 and column 4, lines 9-16).

For dependent claims 19 and 21-23, see column 4, lines 1-12 of Riede concerning static mixer or saturator. And see page 2, lines 69-79 and page 3, lines 15-18 of Calvert.

For claim 20, mixture concentrations may vary (Calvert at page 1, lines 68-78).

For claims 24 and 25, Nachtman teaches to measure conductivity or other means to measure quality of water and included ions to determine effectiveness of the deionising (column 8, lines 53-55).

For claim 26, other oxides or dioxides may be added (Calvert at page 2, lines 51-54).

For claims 27 and 28, Calvert suggests property of induced precipitation (page 2, lines 80-81).

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Hsing et al patent 4,670,150 is of interest for teaching a method of water treatment in which water is purified by a combination of membrane desalination and distillation methods followed or preceded, in a re-circulating loop, by addition of chemicals to treat including lime and polymer.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph Drodge at telephone number 571-272-1140. The examiner can normally be reached on Monday-Friday from 8:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Roy Sample, can be reached at 571-272-1376. The fax phone number for the examining group where this application is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either private PAIR or Public PAIR, and through Private PAIR only for unpublished applications. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have any questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JWD

November 2, 2007


JOSEPH DRODGE
PRIMARY EXAMINER